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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/567,566	02/08/2006	Hiroshi Morinaga	Q93052	6626
23373 7590 02/21/2007 SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			EXAMINER JENKINS, JERMAINE L.	
			ART UNIT	PAPER NUMBER
			2855	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		02/21/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/567,566	Applicant(s) MORINAGA, HIROSHI	
	Examiner Jermaine Jenkins	Art Unit 2855	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 15 is/are rejected.
- 7) ☒ Claim(s) 7-14 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 February 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>02082006</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-5 & 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Aubel et al (6,921,197).

In regards to claim 1, Aubel et al teaches a sensor-incorporating tire having at least two tire input detection means (22, i.e. temperature sensors) for detecting an input from the road which acts on a tire tread portion which are buried in a tread rubber (Column 4, lines 17-22) on the outer side in the radial direction of a tire belt layer (10) (Column 2, lines 34-49 & Column 3, lines 39-50; See Figure 1).

With respect to claim 2, Aubel et al teaches wherein two of the tire input detection means (22) are arranged at linearly symmetrical positions which are equally distant in the axial direction from the center in the axial direction of the tire (See Figure 1).

With respect to claim 3, Aubel et al teaches wherein the tire input detection means (22) are arranged on the inner side in the radial direction of a tread block contact portion (See Figure 1).

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With respect to claims 4 & 5, Aubel et al teaches wherein the tire input detection means (22) are pressure sensors whose detection direction is a tire radial direction (Due to the direct relation between temperature and pressure within the tire, the measured parameters (T1 and T2) of the temperature sensors are used to detect the loss of air pressure within the tires; See Column 6, lines 1-8).

With respect to claim 15, Aubel et al teaches monitoring the ratio of tire input detection values at linearly symmetrical positions which are equally distant in the axial direction from the center in the tire axial direction of the tire tread portion obtained by using the sensor-incorporating tire and estimating that the unsymmetrical wear of the tire proceeds when the ratio exceeds a preset threshold value for a predetermined time or longer (Column 2, lines 5-17; Column 6, line 60 – Column 7, line 1; Column 9, lines 15-28).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Aubel et al (6,921,197) in view of Frey et al (5,749,984).

With respect to claim 6, Aubel et al teaches the claimed invention except for detecting the contact lengths of at least two locations of a tire tread portion by using the

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sensor-incorporating tire and wheel speed measuring means; and estimating the conditions of a running tire based on the detected contact lengths.

Frey et al teaches a tire monitoring system that detects the contact lengths of at least two locations of a tire tread portion by using the sensor-incorporating tire and wheel speed measuring means and estimates the conditions of a running tire based on the detected contact lengths (Column 5, line 60 – Column 6, line 65; See Figures 1a, 3 & 4). It would have been obvious to one having ordinary skill in the art at the time the invention was made to wheel speed measuring means and contact lengths detection means as taught by Frey et al into the sensing apparatus of Aubel et al for the purpose of measuring the length of the contact between the tire and the ground surface for improving the life-cycle fatigue of the tire's carcass (See Column 2, line 55 – Column 3, line 4; Frey et al).

Allowable Subject Matter

5. Claims 7-14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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- U.S. Patent 6,666,079 (Poulbot et al) – Tire Comprising a Measurement Device

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jermaine Jenkins whose telephone number is 571-272-2179. The examiner can normally be reached on Monday-Friday 9am-530pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on 571-272-2180. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jermaine Jenkins
A.U. 2855


EDWARD LEFKOWITZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800